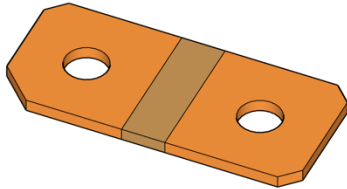




# SBL 3515 Series

Low Ohmic EB Welded Precision Resistor



## Features

- 7 Watts Permanent Power
- High Conductivity Copper Connectors
- Excellent Long Term Stability
- High Application Temperature Range -65°C to +170°C
- Max. Solder Temperature up to 350°C / 30Sec
- Flame Resistant
- Solid Metal Construction
- RoHS and REACH Certified
- AEC-Q200 Compliant



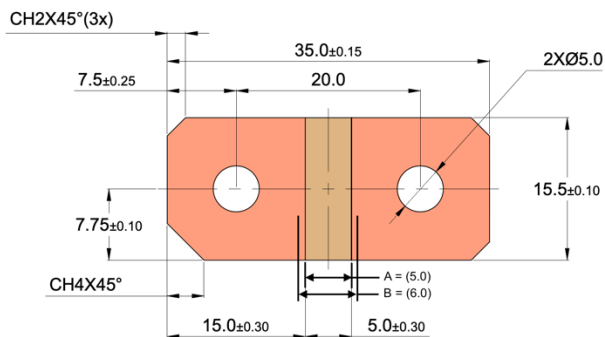
## Applications

- Current Sensing/ Feedback
- Automotive Applications
- Power Modules
- Frequency Convertors
- Inverters
- Low Inductance Applications



## Technical Data

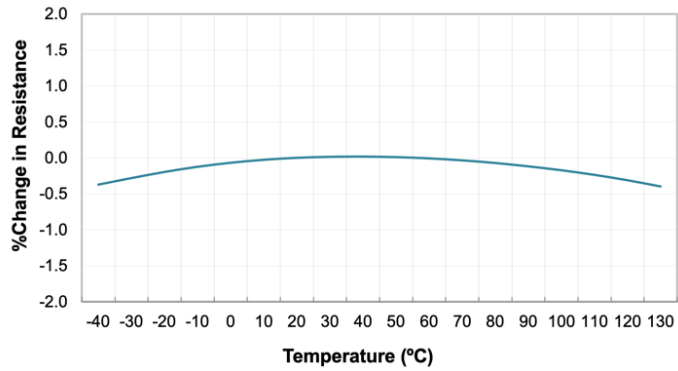
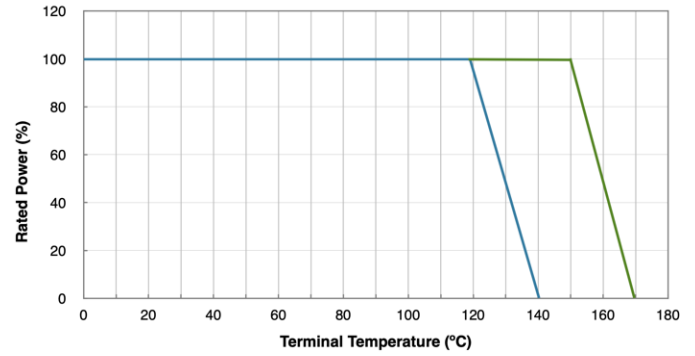
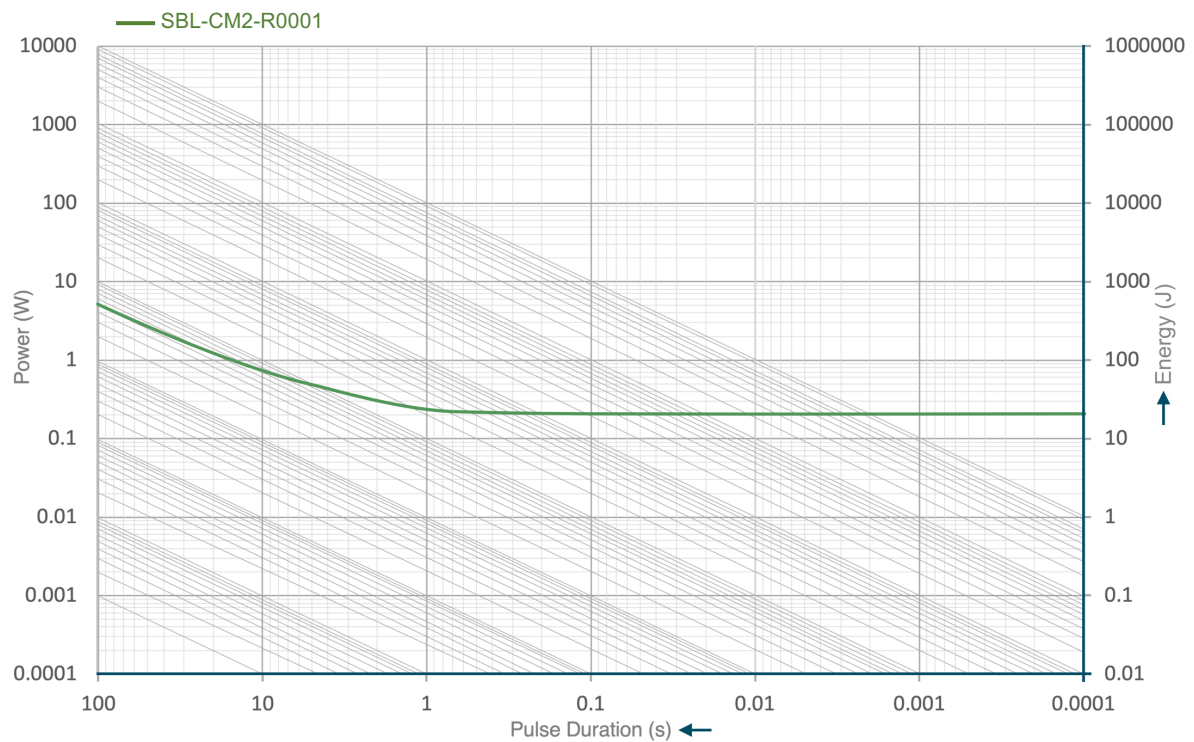
Resistance Values	0.1	(mΩ)
Tolerance	5	(%)
TCR - Temperature Coefficient (Resistive Alloy)	< ±20 (Copper Manganese Alloys)	(ppm/K)
TCR - Temperature Coefficient (Component)	< ±75 (at A) and < ± 150 (at B)	(ppm/K)
Applicable Temperature Range	-65 to +170	°C
Load Capacity ( P70°C )	7	W
Load Capacity ( P120°C )	5	W
Inductance	< 5	nH
Thermal EMF	< 1	μV/°C
Internal Heat Resistance	< 4	°C/W
Stability Deviation	< 0.5 after 2000 Hours, T <sub>i</sub> *= 120°C	%
* T <sub>i</sub> = Terminal Temperature	< 1.0 after 2000 Hours, T <sub>i</sub> *= 150°C	%





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**Resistance Change vs Temperature****Power Derating Curve****Maximum Pulse Energy Curve**

Power curve for continuous operation



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### Performance:

Type of Test	Reference STD	Test Specifications	Acceptance Criteria
High Temperature Exposure	MIL-STD-202 Method 108	1000Hrs. @ T=170°C.Unpowered.	$\Delta R$ +/-1%
Temperature Cycling	JESD22 Method JA-104	-55°C to 150°C, 1000Cycles, 30Mins at each extreme	$\Delta R$ +/-0.5%
Biased Humidity	MIL-STD-202 Method 103	85°C & 85RH with 10% operating power, 1000Hrs	$\Delta R$ +/-0.2%
Operational Life	MIL-STD-202 Method 108	120°C at rated power,1000Hrs	$\Delta R$ +/-0.5%
External Visual	MIL-STD-883 Method 2009	Visual inspection	Visual
Physical Dimension	JESD22 Method JB-100	Dimensional inspection as per SBCL Specifications	Shall confirm within tolerance limits
Resistance to Solvents	MIL-STD-202 Method 215	Clean with Aqueous chemical	Marking shall be legible
Mechanical Shock	MIL-STD-202 Method 213	100g for 6ms, Half sine	$\Delta R$ +/-0.2%
Vibration	MIL-STD-202 Method 204	5g for 20Mins, 12 cycles each of 3 orientations.10-2000Hz	$\Delta R$ +/-0.2%
Resistance to Soldering Heat	MIL-STD-202 Method 210	Solder Temp. 260°C, Time 10Secs	$\Delta R$ +/-0.5%
Solderability	J-STD-002	As per J-STD-002	>95% Coverage in 10x Magnification
Electrical Characterization	User Spec.	Resistance as defined	Shall confirm within tolerance limits
Short Time Over Load	--	5x Rated Power for 5Secs	$\Delta R$ +/-1%
Low Temperature Storage	--	-65°C for 24Hrs	$\Delta R$ +/-0.2%

### Packing:

- 100 Pieces vacuum packed in plastic bags
- Customised tray packing available on request
- Tube packing available on request

### Example of ordering Code

#### SBL-CM2-R0001-5-BK

